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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,275	03/08/2001	Paola Belloni	P01,0108	6581

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SCHIFF HARDIN & WAITE
6600 SEARS TOWER
233 S WACKER DR
CHICAGO, IL 60606-6473

EXAMINER

PAYNE, SHARON E

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 10/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,275

Applicant(s)

BELLONI ET AL.

Examiner

Sharon E. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2002 and 14 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 09 July 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 71.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The substitute specification will not be entered because the Applicant has made no statement that it contains no new matter. See M.P.E.P. 1.125.

Claim Objections

2. Claim 28 is objected to because of the following informality: the phrase "the hollow light" in line 3 should be "the hollow light guide." Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 30-32 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30 recites the limitation "the light output face" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the spacer elements" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 32 provides for the use of the light units, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 36 is indefinite for reciting the limitation "wherein the step of arranging will position at least two of the prefabricated components side by side on the specific area within the region between adjacent prefabricated components." How does one place adjacent objects in the

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space between the adjacent objects themselves? This appears to be impossible, and this claim could not be examined any further.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 34, 35 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Franck et al. (U.S. Patent 3,150,833).

Regarding claim 34, Franck et al. discloses a ceiling mounted light refractor. The method for making the light refractor includes the steps of providing the prefabricated component (refractor, reference number 100), arranging the prefabricated component to fill the specific area except for a region having dimensions that are smaller than the dimensions of the prefabricated component (Fig. 2) and fastening the component to the support structure (Fig. 1).

Concerning claim 35, Franck et al. discloses the prefabricated component as a light permeable component (refractor, reference number 100).

Regarding claim 40, Franck et al. discloses the step of securing a spacer element in each region between the adjacent prefabricated components (Figs. 1 and 17).

6. Claim 34 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (U.S. Patent 5,704,703).

Regarding claim 34, Yamada discloses a lighting device. The method for making the lighting device includes providing a prefabricated component (reference number 110), arranging

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the prefabricated component to completely fill the specific area (Fig. 18), and fastening the component to the support structure (Fig. 18).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 19-23, 27, 29, 31 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer (U.S. Patent 5,692,822).

Regarding claim 19, Dreyer discloses a support structure (cover, reference number 12), at least one hollow light guide with a cavity (light conduit, reference number 14), at least one lamp for directing light into the cavity (reference number 20), one or more optical components having light directing properties for influencing the beam path of the light output from the lamp (column 5, lines 33-40 and column 6, lines 8-18), at least one of the optical components being a light permeable component having a medium with a first index of refraction (column 5, lines 33-

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40) and having a boundary surface (Fig. 13) with a medium of a second index of refraction different from the first (column 6, lines 8-18), said light permeable component being part of the light output device (Fig. 13, reference numbers 12 and 14) and the boundary surface being provided with a light refractive structure for deflecting light in at least one plane directed perpendicular to the light exit face so that the light intensity distribution curve of the light emerging at the light exit face is influenced in this plane (Fig. 13). Dreyer does not disclose a plurality of light units or at least one of the optical components of each light unit being mounted on the support structure and being dimensioned so that it can be used in any one of the light units of the system.

Providing a plurality of light units is considered to be an obvious duplication of parts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the optical components using standard dimensions to make the parts interchangeable, since rearranging the parts of an invention involves only routine skill in the art.

Concerning claim 20, Dreyer discloses a cap reflector that is a prefabricated component of a fixed dimension so that it can be attached and installed in each support structure (reference number 22).

Regarding claim 21, Dreyer does not disclose a plurality of light units, each light unit having a support structure that has the same dimensions for receiving the at least one element.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the support structures using standard dimensions to make the elements interchangeable, since rearranging the parts of an invention involves only routine skill in the art.

Concerning claim 22, Dreyer discloses a partially light-transmissive cap reflector (reference number 22). Dreyer does not specifically discuss the reflector's interchangeability.

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It would have been obvious to one having ordinary skill in the art to make the reflector interchangeable between the light units of the system so that the light unit can be changed between a direct lighting unit and a lighting unit with some indirect lighting, since rearranging the parts only involves routine skill in the art.

Regarding claim 23, Dreyer discloses a reflector selected from cap reflectors having different reflecting properties and having dimensions so that the reflector can be interchangeably used in the light units of the system to change the emission properties of the units (reference number 22).

Regarding claim 27, Dreyer discloses a reflector selected from input reflectors having different reflecting properties (reference number 22). Dreyer does not disclose making the reflectors interchangeable.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the reflectors interchangeable, since rearranging parts of an invention involves only routine skill in the art.

Concerning claim 29, Dreyer discloses different emission properties according to the optical properties of at least one of the optical components being mounted on the support structure (column 5, lines 33-40 and column 6, lines 8-18). Dreyer does not disclose a group of light units with the same dimensions and different emission properties.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a plurality of light units with interchangeable parts having different emission properties, since rearranging parts only requires routine skill in the art.

Concerning claim 31, Dreyer does not disclose a plurality of spacer elements with different dimensions. In Dreyer the cover (reference number 12) operates as a spacer element

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(Fig. 13), because it causes a space to be maintained between the cover and the light conduit (reference number 14).

It would have been obvious to one of ordinary skill in the art to provide a plurality of spacer elements with different dimensions, because providing a plurality of elements and changing the size of an element involves only routine skill in the art.

Regarding claim 37, Dreyer discloses the lamp (reference number 20) being arranged outside the hollow light guide and coupling light into the cavity of the hollow light guide from the outside (Fig. 13).

Concerning claim 38, Dreyer discloses optical components dimensioned so that by replacing the component of the light unit with another of the components having different properties, the light unit will have different light emission properties (column 5, lines 33-40).

10. Claims 19, 24, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (U.S. Patent 5,704,703).

Regarding claim 19, Yamada et al. discloses a support structure (reference number 107), at least one hollow light guide with a cavity (Fig. 18), at least one lamp (reference number 105) for directing light into the cavity, one or more optical components (reference numbers 102, 110 and 116) having light directing properties for influencing the beam path of the light output from the lamp (Fig. 18), at least one of the optical components being a light permeable component having a medium with a first index of refraction (reference number 110) and having a boundary surface (reference number 110) with a medium of a second index of refraction different from the first (reference number 102), the light permeable component being part of the light output device and the boundary surface being provided with a light-refractive structure for deflecting light in at least one plane directed perpendicular to the light exit face, so that the light

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intensity distribution curve of the light emerging at the light exit face is influenced in this plane (Fig. 18). Yamada et al. does not specifically disclose interchangeable components.

Providing a plurality of light units and using interchangeable parts are considered to be obvious variations in design. It would have been obvious to one of ordinary skill in the art to use parts that can be rearranged in the Yamada et al. reference for ease of manufacture.

Concerning claim 24, Yamada et al. discloses light permeable components (reference numbers 116, 110 and 102) selected from plate elements having different light refractive structures so that the light emission properties of the light unit is changed by changing the plate elements (Fig. 18).

Regarding claim 25, Yamada et al. discloses the refractive structure of the plate elements essentially preventing a light emission above a limited angle relative to the perpendicular *vis a vis* the light exit face in at least one plane perpendicular to the light exit surface so that the shielding of light emerging at the light exit face is produced in this plane (column 15, line 39, through column 16, line 3).

Concerning claim 26, Yamada et al. discloses the plate elements having the same length and width (Fig. 18).

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer in view of Dreyer, Jr. (U.S. Patent 5,043,850).

Regarding claim 28, Dreyer discloses the input reflector that directs part of the light to bypass the hollow light guide to provide indirect lighting (abstract). Dreyer does not disclose an input reflector that completely reflects light into the hollow light guide. Dreyer, Jr. discloses a reflector (reference number 17) that completely reflects light into the hollow light guide (Fig. 1).

It would have been obvious to one of ordinary skill in the art to use the reflector of Dreyer, Jr. in the apparatus of Dreyer for completely reflecting the light into the light guide.

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12. Claims 30 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. in view of Franck et al.

Regarding claim 30, Yamada et al. does not show a group of light units with a different light output face. Franck et al. discloses a group of light units with a light permeable component that is a plate element (reference number 100) and the support structure of each of the light units if said group has the same dimensions for receiving the plate element (Fig. 1).

Using a different light output face for each light unit is considered to be an obvious variation in design. Since the light output face (a refractive element) is well known in the art, it would have been obvious to one of ordinary skill in the art to use a refractive element having a different index of refraction in the Yamada et al. reference for changing the direction of the light from a light unit.

It would have been obvious to one of ordinary skill in the art to use the plurality of support structures of Franck et al. in the Yamada et al. reference for supporting a plurality of light units.

Concerning claim 39, Yamada et al. does not disclose a spacer element. Franck et al. discloses at least one of the light units of the group receiving at least two plate elements with adjacent plate elements being spaced apart by a spacer element (Figs. 1 and 2).

13. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. in view of Koike et al. (U.S. Patent 6,290,364 B1).

Regarding claim 33, Yamada et al. does not disclose at least two light permeable components arranged in a stack with the light refractive structure arranged to create a shielding effect at least in two directions perpendicular to each other. Koike discloses at least two light permeable components (reference numbers 73 and 74) arranged in a stack with the light

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refractive structure arranged to create a shielding effect at least in two directions perpendicular to each other (Fig. 18).

It would have been obvious to one of ordinary skill in the art to use the stack of Koike et al. in the apparatus of Yamada et al. for creating a shielding effect at least in two directions perpendicular to each other.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

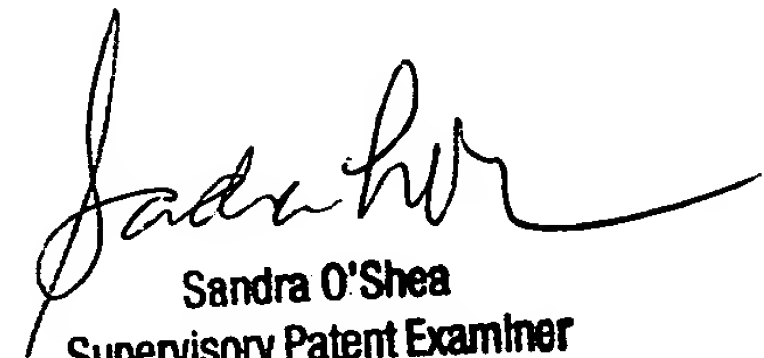
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon E. Payne whose telephone number is (703) 308-2125. The examiner can normally be reached on regular business hours.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

sep
October 28, 2002



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800